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On the Status of TP in Turkish

Abstract

In this paper I provide evidence that the element traditionally analyzed as T^0 in Turkish is, in fact, a realization of a Mood-head, which is the locus of epistemic modality/conditional. This treatment captures a set of facts surrounding the phenomenon of Suspended Affixation (SA) as well as possible combinations of affix stacking in Turkish, while maintaining the Tense-Mood-Aspect hierarchy. In addition, the analysis advanced in this paper derives the behavior of Q-particles, verbal interactions with the “sentential” negation head, restrictions on embedding, and the optionality of agreement Spellout. Theoretically, the paper contributes to the debate on the inventory of functional projections in languages: it contends that TP is not universally present and considers some broader typological implications of this claim.

Keywords

Turkish, NP-languages, Suspended Affixation, affix stacking, T-projection

Streszczenie

W niniejszym artykule zostały przedstawione dane przemawiające za tym, że element struktury zdaniowej, tradycyjnie analizowany w języku tureckim jako rdzeń kodujący czas gramatyczny $T(ense)^0$, jest w istocie realizacją kategorii trybu (*Mood-head*), w którym jest kodowana modalność epistemiczna/tryb przypuszczający. Takie ujęcie pozwala wyjaśnić pewne zjawiska towarzyszące tzw. zawieszonej afiksacji (*Suspended Affixation*), a także możliwe kombinacje kumulowania afiksów w tureckim, przy jednoczesnym zachowaniu hierarchii kategorii czasu, trybu i aspektu. Przedstawiona analiza umożliwia ponadto wyjaśnienie zachowania partykuł pytajnych (*Q-particles*), interakcji czasownika z rdzeniem negacji zdaniowej, ograniczeń zagnieżdżania składników oraz opcjonalności morfologicznych wykładników związku zgody. Z punktu widzenia teorii języka artykuł stanowi wkład w debatę nad inwentarzem projekcji funkcyjnych. Autorka wysuwa wniosek, że obecność projekcji składniowej czasu gramatycznego (TP) w strukturze zdaniowej nie jest uniwersalna, i rozważa jego szersze implikacje.

Słowa kluczowe

turecki, języki z NP, zawieszona afiksacja, kumulowanie afiksów, projekcja czasu gramatycznego (TP)

Introduction

Turkish evinces a phenomenon, termed *Suspended Affixation* (SA) (Lewis 1967), defined as a process whereby the inflectional morphology attaches to the last word of the conjunct, but takes scope over both constituents of the &P, as in (1). In (1a) the adjectives are coordinated, but the morphology (copula-tense-agreement markers in this case) is “suspended”, surfacing only once after the second element. This contrasts with (1b), where the affixes are repeated after each conjunct. The placement of nominal morphology (case, number, and possessive affixes), likewise, can be delayed (demonstrated in (2) for the plural morpheme). Finally, certain verbal forms can be coordinated in the same fashion, as in (3). The focus of this paper is confined to the verbal domain.

- (1) a. Zengin ve ünlü-y-dü-m.
rich and famous-Cop-Past-1sg
'I was rich and famous.'
b. Zengin-Ø-di-m ve ünlü-y-dü-m.
rich-Cop-Past-1sg and famous-Cop-Past-1sg
'I was rich and famous.' (Kabak 2007: 314)
- (2) a. ev ve dükkân-lar
house and shop-Pl
'houses and shops'
b. ev-ler ve dükkân-lar
house-Pl and shop-Pl
'houses and shops' (Broadwell 2008)
- (3) a. Gel-iyor ve gid-iyor-um
come-PresProg and go-PresProg-1sg
'I am coming and going.'
b. Gel-iyor-um ve gid-iyor-um
come-PresProg-1sg and go-PresProg-1sg
'I am coming and going.' (Kornfilt 1996: 110)

The phenomenon of SA has been investigated by a number of researchers. Good and Yu (2000a, 2000b) invoke SA to argue for the affixal/clitic-like dichotomy of agreement markers. For them, SA is a test for morphosyntactic properties of Turkish subject agreement elements. Kornfilt (1996) argues for a particular split in the verbal domain: according to her, certain verbal markers are obligatorily supported by an (often phonologically null) copula. Crucially, it is only those forms that allow for SA. This analysis is further developed in Hankamer (2012), who suggests that SA is a result of adphrasal affixation. Kahnemuyipour and Kornfilt (2010) consider SA from the standpoint of prosodic effects. Orgun (1995) focuses on SA in the nominal domain, arguing for a flat structure in the environments where SA is licit.

The current enterprise, though geared towards the investigation of the mechanism underlying SA, is somewhat larger in scope. With Kornfilt (1996),

I will argue that certain verbal forms in Turkish are obligatorily supported by the copula. This copula takes &P as its complement, as shown in (4a). In the copular contexts, the conjuncts are coordinated at the level of AspectP; the former are argued to be [-verbal] elements. By contrast, the copula *is* of [+verbal] nature, and, hence, subject to head movement. It adjoins to the Mood head, which hosts relevant agreement affixes. The schema in (4a), then, yields the SA surface facts.

On the other hand, some verbal forms do not involve a copula. In such situations, the [+verbal] conjuncts are coordinated at the MoodP level. These are precisely the forms for which SA is prohibited. This restriction follows from the obligatory head movement and the CSC, as sketched in (4b).

- (4) a. [[_{&P} [_{AspP}...] & [_{AspP}...]] Cop] **Mood** = hosts Agreement Affixes
 ↑
 b. [[_{&P} [_{MoodP}...] & [_{MoodP}...]] **Mood** = hosts Agreement Affixes
 ↑
 ***CSC violation**

Apart from explaining the full array of empirical facts associated with SA, my analysis also contributes to the refinement of the verbal structure in Turkish. In essence, I argue, that Turkish has no separate TP projection. I will show that the suffixes that could be plausibly generated under a T^0 head are, in fact, the locus of mood. Along with explaining rather naturally the properties of certain verbal forms in SA contexts, this treatment captures an aggregate of independent morphosyntactic facts in Turkish, such as possible combinations of affix stacking, the interactions of verbal forms with Q-particles and “sentential” negation, restrictions on embedding, and the optionality of agreement morphology spellout.

A great deal of literature is dedicated to Turkish verbal inflection. Generally speaking, researchers concur that the Turkish inventory of functional projections includes tense, mood, and aspect (Borsley and Kornfilt 2000; Erguvanlı Taylan 2001; Keleş 2001; Kornfilt 1997; Sezer 2001; Yavaş 1980, a.o.). The debate concerns the division of labor between syntax and semantics: some researchers maintain that formal structure corresponds to finite inflection (Cinque 2001; Erguvanlı Taylan 1986), others argue that a given morpheme in Turkish often codes for several semantic categories simultaneously (Erguvanlı Taylan 2001; Sezer 2001). Some proposals are akin to the analysis presented here: Kornfilt and Whitman (2011), for example, argue that Turkish nominalized clauses (though not their fully inflected counterparts) have a defective T. Note, however, that I make a stronger claim: I argue that TP is not a part of the Turkish functional inventory at all.

On the broader theoretical level, my analysis channels certain typological implications congruent with Bošković's recent theorizing on the link between NP-languages and the absence of a T-projection (Bošković 2012, 2013).

Bošković (2012) argues that the presence/lack of articles in a language plays an important role in that languages without articles lack the functional DP-layer. From this he derives a number of syntactic and semantic generalizations, based primarily on Slavic data. He shows a consistent split between Bulgarian and Macedonian, the only two Slavic languages with articles (hence DP-languages), on the one hand, and the remaining members of the Slavic family, the article-less (or NP-) languages, on the other hand. This consistently uniform patterning of DP vs. NP-languages is manifest in a variety of constructions: for instance, of all the Slavic languages only Bulgarian and Macedonian prohibit Left-Branch Extraction, but have clitic doubling. The analyses of such typological patterning crucially hinge on the absence/presence of DP.

Bošković (2012) further conjectures that the absence of DP implies the absence of TP. The reason for this correlation is rooted in the long observed parallelism between a noun phrase and a clause. Bošković argues that the DP-layer in the traditional noun phrase should be equated with the T^0 (and not C^0) projection in the clausal domain, since SpecDP is the host of the counterpart of movement to SpecTP; thus, SpecDP constitutes the target for the movement of *John* in *John's destruction of the painting* much like SpecTP provides a landing site for *John* in *John destroyed the painting*. It follows, then, that TP will be missing in NP-languages. Analyses along these lines have been applied to a number of languages to capture a variety of phenomena, including various Slavic languages (Migdalski to appear, 2013, 2010; Paunović 2001; Todorović to appear a, b, c), Korean (Kang 2013, 2012a, 2012b), Latin (Monich 2012), as well as within a more general crosslinguistic setting (Despić 2011).

Bošković and Şener (2014) and Bošković (2012), running a number of tests, argue that Turkish patterns with NP-languages. If this is correct, then Turkish is expected to lack TP. My analysis attempts to demonstrate precisely that. It is to be construed as a means of providing independent evidence in favor of this hypothesis.

Another theoretical consequence of my proposal concerns the absence of a separate Agr projection. I will provide some empirical evidence that agreement morphology in Turkish is fused with a Mood head, rather than generated in a specially designated Agr⁰ (as in Tosun 1998). This is congruent with Chomsky's (1995) deductions on the status of Agr in UG.

2. Empirical domain

In the ensuing discussion I review a number of sources that have touched upon the issue of SA, whether directly or as an additional point in the context of a larger research project. The goal of this section is to present the range of empirical issues pertaining to SA. Ultimately, I adopt many features of the analy-

ses that I am presenting below. Therefore, I reproduce a number of previous arguments in some detail.

2.1. The role of the copula in Turkish morphology (Kornfilt 1996)

Kornfilt (1996) presents a morphological analysis of the verbal forms in Turkish (see also Kahnemuyipour and Kornfilt 2010). Under her analysis only two forms instantiate “real” verbal inflection – the definite past form and the conditional. The other verbal forms arise as a result of copula inflection and subsequent cliticization to the participial stem. These facts are demonstrated in Table 1. There are four participial affixes (-Iyor, -mİş, -Ir, and -AcAk). Once one of them is introduced into the structure, the copula must obligatorily follow (though it may be phonologically non-overt). The agreement morphology, then, attaches to the copula. In “true” verbal forms (with affixes -sA and -DI), no copula intervenes between a verbal affix and the agreement morphology.

Table 1: “Fake” vs. “True” forms

I. “Fake” forms				II. “True” forms			
Participial Affix (PA)		Meaning		Verbal Affix (VA)		Meaning	
V+Iyor		Progressive					
V+mİş		Evidential past		V+DI ¹		Simple Past	
V+Ir		Aorist		V+sA		Conditional	
V+AcAK		Future					
<u>a. Internal structure with “fake” forms:</u>				<u>b. Internal structure with “true” forms:</u>			
V+PA+Copula+Agreement				V+VA+Agreement			
gid-	iyor	-Ø	-um	git-	ti	-m	
go-	PA: Prog	Cop	Agr: 1sg	go-	VA: Past	Agr: 1sg	
‘I am going’				‘I went’			

This dichotomy allows the researcher to explain a number of empirical facts that obtain in the verbal domain.

First, “true” verbal affixes comply with the regular stress patterns of the language, getting the expected word-final stress (shown in (5) for first person plural), unlike their “fake” counterparts in (6). In the latter paradigm the stress

¹ Under my analysis -DI is not an instantiation of past tense; it is rather generated under Mood. For the ease of exposition and to retain the spirit of Kornfilt’s analysis, I will maintain the original glosses in this section.

- (9) a. *Gid- ecek- tir*
 go- Fut- EpCop
 'She will probably go.'
- b. **Git- ti- dir.*
 go- Past EpCop
 Intended: 'She probably went.'
- (Kornfilt 1996: 108)

Another argument for the dissociation of the two verbal paradigms in Turkish comes from the interaction of "true" and "fake" verbal forms with the question particle. The latter obligatorily follows the agreement morphology attached to the "true" verbal forms, but precedes the agreement suffixes of the participial forms. This is expected under Kornfilt's account. The participial forms shown in (10) are complex underlyingly, but the ones in (11) are simple: while the focusing (question) particle can cliticize to the copula, it cannot intervene between tense and agreement to split a simple form.

- (10) a. *gid-ecek-γ-mi-siniz?* "Fake" verbal forms:
 go-Fut-Cop-Q-2pl Part>Cop>Q>Agr
 'Will you go?'
- b. **gid-ecek-siniz-mi?* *Part>Agr>Q
 go-Fut-2pl-Q
- (11) a. *git-ti-niz-mi?* "True" verbal forms:
 go-Past-2pl-Q V>T>Agr>Q
 'Did you go?'
- b. **git-ti-mi-niz?* *V>T>Q>Agr
 go-Past-Q-2pl

Finally, Kornfilt invokes suspended affixation (SA) facts to argue for the distribution of the Turkish copula. SA, she concludes, is possible with "fake" verbal forms, but prohibited with "true" verbal forms. In other words, only the forms supported by the copula can suspend their affixes, as in (12).

- (12) a. [*oku-yacak ve anla-yacak-γ*]-sın
 read-Fut and understand-Cop- 2sg
 'You will read and understand.'
- b. *[(*kitabı*) oku-du ve anla-dı]-m
 book read-Past and understand-Past-1sg
 Intended: 'I read and understood the book.'

2.2. The feature composition of "fake" and "true" verbal forms (Kelepir 2001)

Kelepir (2001) offers an additional diagnostic for the disambiguation of "true" verbal forms and participial forms. In order to appreciate her contribution, it is necessary to detour into the mechanism implicated in Turkish embedding. The latter proceeds via nominalization, whereby a nominalizing suffix attaches to the bare verbal root. In (13), the suffix *-DIK-* converts a bare verbal element

into a nominal-like entity. The resulting string acquires nominal inflection: in (13), it gets third singular embedded subject agreement and case assigned by the matrix verb.

- (13) Fatma [Ayşe'nin git-**tiğ**]-in-i bil-iyor.
 Fatma [Ayşe-Gen go-**Nom**]-3sg-Acc know-Prog3sg
 'Fatma knows that Ayshe went away.' (Hoffman 1992: 302)

Keleşir observes that *-DIK-* cannot stack on either participial ("fake") or "true" verbal forms:

- (14) a. *Fatma [Ayşe'nin gid-**iyor-diğ**]-in-i bil-iyor.
 Fatma [Ayşe-Gen go-**Prog-Nom**]-3sg-Acc know-Prog3sg
 b. *Fatma [Ayşe'nin git-**ti-diğ**]-in-i bil-iyor.
 Fatma [Ayşe-Gen go-**Past-Nom**]-3sg-Acc know-Prog3sg

However, participial forms can embed under the verb *ol-* 'to be' as in (15). This is in contrast to the "true" verbal forms in (16), which remain illicit in such environments (the data below are from Keleşir 2001: 34):

- (15) a. [Senin sinava hazırlan-**ıyor ol-duğ**]-un-u biliyorum.
 [you-Gen exam prepare-**Prog be-Nom**]-2sg-Acc know
 'I know that you are preparing for the exam.'
 b. [Senin sinava hazırlan-**mış ol-duğ**]-un-u biliyorum.
 [you-Gen exam prepare-**Perf be-Nom**]-2sg-Acc know
 'I know that you have prepared for the exam.'
 (16) * [Senin gel-**di ol-duğ**]-un-u duy-du-m.
 you-Gen come-**Past be-Nom**-2sg-Acc hear
 'I heard that you had come.'

Under Keleşir's analysis the nominalizing affix attaches to the elements specified as [+verbal]: since the function of the nominalizing morpheme is to transform an element into a noun-like entity, the host must be [+verbal]. If the participial forms are [-verbal], however, it follows that *-DIK-* cannot take them as complements, hence the unacceptability of (14a). On the other hand, a verbal element like *ol-* 'to be' subcategorizes for a [-verbal] complement. This is why the participial forms in (15), but not the true verbal forms in (16), are allowed to embed under it. The proposal is summarized in Table 2 below:

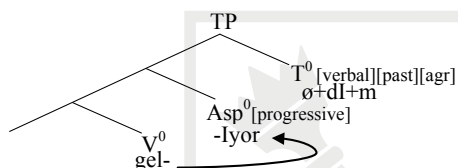
Table 2: Feature composition of "fake" forms vs. "true" forms

"Fake" forms: V+Iyor / mİş / AcAK / Ir <i>require a copula</i>	"True" forms: V+DI / sA <i>no copula</i>
[-verbal]	[+verbal]
Embed under <i>ol-</i> _[-verbal] 'to be'	Do not embed under <i>ol-</i> _[-verbal] 'to be'
Do not embed directly under <i>-DIK-</i> , which requires a [+verbal] complement	

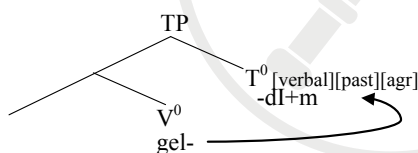
This analysis, though otherwise compelling, lacks one crucial piece: what precludes (14b)? Observe that the form *git-ti* ‘go-Past’ is [+verbal], which, in turn, predicts that direct embedding under the nominalizing suffix *-DIK-* should be licit, contrary to fact. I discuss this issue in my analysis (Section 3).

Returning now to the SA facts. Kelepir’s analysis of the phenomenon hinges on the feature composition of the elements implicated in SA structures. The participial affixes are generated under Aspect^0 , as in (17). The verb raises to pick up the aspectual marker, which renders the resulting complex [–verbal]. Next, the inflected copula (generated under T^0 with tense and agreement) is introduced into the structure. No subsequent movement takes place: the verbal element (i.e., the copula) is generated directly under T^0 . In the absence of AspP , as in (18), no copula is available, so the verb is forced to move to T^0 . This is how the “true” verbal forms are derived.

- (17) Ben gel-iyor-Ø-du-m. = “Fake” verbal forms
 I go-Prog-Cop+Past+1sg
 ‘I was going.’



- (18) Ben gel-di-m. = “True” verbal forms
 I go-Past-1sg
 ‘I went.’



The SA facts follow directly from the above account: if two AspPs are coordinated, they can share a copula (that is, a copula can take &P as its complement). The verbs raise to their respective AspPs . No further movements take place; the copula instantiating a verbal element is merged. If, however, the coordination occurs at the level of VP, then the required verb movement out of a conjunct as in (18) will induce CSC violations. Therefore, SA is impossible with “true” verbal forms.

2.3. One counterexample (Kabak 2007)

Thus far we are presented with a clean picture: the facts seem to point to a rather nice split between the participial and “true” verbal forms. Both Kornfilt (1996) and Kelepir (2001) concur that only the former participate in SA contexts, which they attribute to the presence of a copula. From a combination of independently necessary mechanisms, Kelepir constructs an analysis, which explains the facts in a straightforward way. Unfortunately, there is one paradigm in (19), reported in Kabak (2007), which appears to falsify the generalization above.

The crucial point to note here is that the copula is markedly *present* in both acceptable and unacceptable strings, yet SA is prohibited. This is shown in (19a) and (19c). Curiously, it is attached to the “true” verbal forms, not the participial, “fake”, varieties, contrary to Kornfilt’s generalizations. As the examples in (19b) and (19d) demonstrate, the non-SA coordination is perfectly acceptable.

- (19) a. *O yaz [Avşaya git-ti ve denize gir-di]-y-di-k.
that summer Avsha-Dat go-Past and sea-Dat enter-Past-**Cop**-Past-1pl
- b. O yaz [Avşaya git-ti-y-di-k] ve [denize gir-di-y-di-k].
that summer Avsha-Dat go-Past-**Cop**-Past-1pl and sea-Dat enter-Past-**Cop**-Past-1pl
‘That summer we went to Avsha and swam in the sea.’
- c. *Ev-imiz-i [sat-sav bir dükkan al-sa]
house-Poss1pl-Acc sell-Cond and one store buy-Cond
-y-di-k, (iyi olurdu).
-**Cop**-Past-1pl (good would.be)
- d. [Ev-imiz-i sat-sa-y-di-k] ve [bir dükkan
house-Poss1pl-Acc sell-Cond-**Cop**-Past-1pl and one store
al-sa-y-di-k], (iyi olurdu).
buy-Cond-**Cop**-Past-1pl
‘(It would be good) if we sold our house and bought a shop.’

Another curiosity arising in conjunction with (19) is demonstrated in (20). The copula cannot stand alone in coordinated or non-coordinated contexts alike: (20) contrasts with the example in (7).

- (20) a. *(O yaz) Avşa-ya git-ti ve deniz-e gir-di i-di-k.
Avsha go-Past and sea enter-Past **Cop**-Past-1pl
- b. *(O yaz) Avşa-ya git-ti i-di-k.
Avsha go-Past **Cop**-Past-1pl
- c. (O yaz) Avşa-ya git-ti-y-di-k.
Avsha- go-Past-**Cop**-Past-1pl
- d. * Ev-imiz-i sat-sa ve bir dükkan al-sa
house-Poss1pl-Acc sell-Cond and one store buy-Cond
i-di-k, (iyi olurdu).
Cop-Past-1pl (good would.be)

- e. * Ev-imiz-i sat-sa i-di-k
 house-Poss1pl-Acc sell-Cond **Cop**-Past-1pl
- f. Ev-imiz-i sat-sa-y-dı-k
 house-Poss1pl-Acc sell-Cond-**Cop**-Past-1pl

2.4. The agreement paradigms (Good and Yu 2000a, 2000b)

Good and Yu observe that Turkish has two sets of agreement affixes, traditionally referred to as *k*- and *z*-paradigms (according to the first plural morpheme):

Table 3: Agreement Affixes

a.	Z-PARADIGM		b.	K-PARADIGM	
	Singular	Plural		Singular	Plural
1 st	-(y)Im	-(y)Iz		-m	-k
2 nd	-sIn	-sInIz		-n	-nIz
3 rd	-Ø	-Ø		-Ø	Ø

The choice of a particular agreement affix depends on the type of the final TMA marker in the sequence of verbal morphemes: the “fake” verbal affixes in (21a) and (22a-d) select for the *z*-paradigm, while the “true” verbal forms in (21b) and (22e-f) require *k*-paradigm endings:

- (21) a. “Fake” verbal forms b. “True” verbal forms
- V+Iyor V+sA V+DI
 V+mİş V+DI
 V+Ir V+DI
 V+AcAK V+DI
- } + **z-paradigm** } + **k-paradigm**
- (22) a. Gel-iyor-Ø-uz ‘we are coming’
 b. Gel-miş-Ø-iz ‘we had come’
 c. Gel-ir-Ø-iz ‘we (habitually) come/come’
 d. Gel-eceğ-Ø-iz ‘we will come’
 e. Gel-dik ‘we came’
 f. Gel-sek ‘if we come/come’

What is pertinent for the current discussion is that SA takes place only with *z*-paradigm endings in (23a) and (23b). By contrast, *k*-paradigm endings in (23c) and (23d) cannot suspend.

- (23) a. [yaz-ıyor ve oku-yor]-Ø-**uz**
 write-Prog and read-Prog-Cop-1pl
 ‘We are reading and writing.’
- b. [yaz-mış ve oku-muş]-Ø-**uz**
 write-Perf and read-Perf-Cop-1pl
 ‘We have read and written.’

- c. **[yaz-dı ve oku-du]-k*
 write-Past and read-Past-1pl
 'We read and wrote.'
- d. **[yaz ve oku-du]-k*
 write and read-Past-1pl
 'We read and wrote.'

Good and Yu argue that the facts in (23) follow from the nature of agreement morphemes: *z*-paradigm endings are clitics and *k*-paradigm endings are affixes. It is not surprising, therefore, that the latter cannot be suspended. Clitics, on the other hand, can be delayed.

This generalization does not cover the full range of SA facts, however. First, it only explains the ungrammaticality of (24a), but fails to predict (24b) to be acceptable. In (24b) the crucial element for SA is not an agreement marker; rather, it is the presence of an implicit copula (which, in turn, is licensed by the participial conjuncts).

- (24) a. **[çalış-tı ve başlar-dı]-k*
 work-Past and succeed-Past-1pl
 'We worked and succeeded.'
- b. *[çalış-acak ve başlar-acak]-Ø-tı-k*
 work-Fut and succeed-Fut-Cop -Past-1pl
 'We will have worked and succeeded.'

Second, Good and Yu's account predicts that (25) should be grammatical, contrary to fact:

- (25) a. **[yaz ve oku-muş]-Ø-uz*
 write and read-Perf-Cop-1pl
 'We read and wrote.'
- b. **[yaz ve oku-yor]-Ø-uz*
 write and read-Prog-Cop-1pl
 'We were reading and writing.'

In (25) and (23d), the first conjunct appears in its bare root form. Hence, (25) and (23d) indicate that the morphological make-up of conjuncts also needs to be taken into account in deriving the SA strings.

2.5. Intermediate summary

The preceding discussion leads us to the following generalizations (summarized in Table 4). First, only participial forms, i.e. the forms which terminate in one of the "fake" verbal affixes (*-Iyor*, *-AcAK*, *-mİş*, and *-Ir*), are eligible conjuncts in SA contexts. These participial forms are supported by a copula. In

contrast, the “true” verbal forms ending in *-DI* or *-sA* are ineligible conjuncts in SA contexts, even when they are followed by a copula glide as in (19).

Second, the participial forms are understood as [–verbal] elements in contrast to the “true” verbal forms, which are analyzed as [+verbal]. This dichotomy explains what necessitates V-movement for the “true” verbal forms. In conjunction with the CSC, this analysis derives the SA facts.

Third, the participial forms and the “true” verbal forms differ with respect to the type of agreement endings they select for. The former choose endings from the *z*-paradigm, the latter – from the *k*-paradigm. *Z*-paradigm endings are clitics (thus, they can suspend), while *k*-paradigm endings are affixes, and hence, cannot be separated from their hosts in syntax.

Table 4: Intermediate summary

	Forms:	Feature composition:	Copula required:	Agreement ending:
Eligible <i>conjuncts</i> in SA:	V+ <i>Iyor</i> V+ <i>AcAK</i> V+ <i>mİş</i> V+ <i>Ir</i>	[–verbal]	Yes	<i>z</i> -paradigm
Ineligible <i>conjuncts</i> in SA:	V+ <i>DI</i> V+ <i>sA</i>	[+verbal]	No/ Yes in periphrastic tense contexts	<i>k</i> -paradigm

Previous research concentrated on the individual properties of conjuncts (such as their feature composition and the copula requirement) *or* on the properties of agreement markers associated with each form. I will show, however, that every entry in Table 4 is necessary to capture the empirical facts associated with SA. That is, the form of the conjuncts, their feature make-up, the presence of a copula, and the agreement markers are all integral pieces of a puzzle, needed to construct a complete picture of SA in Turkish.

2.6. Additional requirements

In addition to the requirements in Table 4, there are additional generalizations that obtain in the SA contexts. It was noted in Section 2.4 that the conjuncts in SA environments must be accompanied by a specific TMA-marker, i.e. they may not appear in a bare form. So, the verbal roots (which Kabak 2007 claims cannot stand alone without the inflectional morphology) are ineligible conjuncts, regardless of whether the following suffix is of participial nature, as in (26a), or of “true” verbal nature, as in (26b).

- (26) a. **[yaz ve oku]-yor-Ø-uz*
 write and read-Prog-Cop-1pl
 Intended: 'We are reading and writing.'
- b. **[yaz ve oku]-du-k*
 write and read-Past-1pl
 Intended: 'We read and wrote.'

I take the data in (26), therefore, as evidence that the conjuncts in question are coordinated at a level higher than VP.²

With this much established, I will now show that the conjuncts must be coordinated below the TP-level. Consider interactions with adverbs. If, as I claim, the level of coordination is between VP and TP, then we expect that lower VP-adjoined adverbs (like *partially*) will only scope over one conjunct. But, the higher, TP-adjoined adverbs (like *probably*), are predicted to scope over both. This is exactly the case, as (27) demonstrates:

- (27) a. John [*kismen sorunu çöz-üyor ve sonuçlarını yayınl-ıyor*]-**du**.
 John partially problem solve-Prog and results publish-Prog-Past
 = 'John solved the problem partially, and published the results.'
 ≠ 'John solved the problem partially, and published the results partially.'
- b. Siz herhalde [*Ayşe'den nefret ed-iyor ve Zeynep'i sev-iyor*]-**sunuz**.
 you probably Ayshe-Abl hate-Prog and Zeynep-Acc love-Prog-2pl
 = 'You probably hate Ayshe, and you probably love Zeynep.'
 ≠ 'You probably hate Ayshe, and you (perhaps, definitely) love Zeynep.'

² Interestingly, Turkish has a suffix *-(y)Ip* that requires bare VP-coordination as demonstrated in (i). In contrast to the free-standing coordinator *ve* 'and' in (26), *-(y)Ip* attaches to the first (bare) conjunct (cf. (ia) and (ib)). Furthermore, *-(y)Ip* cannot follow any TMA markers. Thus, the string in (ic), where the affixal coordinator stacks on the progressive marker, is ungrammatical. The equivalent sentence with *ve* in lieu of *-(y)Ip* in (id) is perfectly acceptable. The morphology following the second conjunct in (ia) obligatorily scopes over both conjuncts.

- (i) a. *Kitap oku-yup makale yaz- di-m*.
 book read-and article write-Past-1sg
 'I read a book and wrote an article.'
- b. **Kitap oku ve makale yaz- di-m*.
 book read and article write-Past-1sg
- c. **Kitap oku-yor-up makale yaz-ıyor-du-m*.
 book read-Prog-and article write-Prog-Past-1sg
 'I was reading a book and wrote an article.'
- d. *Kitap oku-yor ve makale yaz-ıyor-du-m*.
 book read-Prog and article write-Prog-Past-1sg

Though *-(y)Ip*-coordination is beyond the scope of this project, it is certainly an interesting phenomenon. The crucial question here is why no violations of the CSC obtain in (ia): we are indeed dealing with [+verbal] elements that must be subject to head-movement. One can speculate that the structures implicated in *-(y)Ip*-coordination do not involve true &P coordination, but rather instantiate some variety of VP-adjunction. I will leave this issue at that, pending further research (see also Kornfilt 1997 for additional data).

Consider now how (27) is distinct from (28): while the high adverb in the SA-environment obligatorily scopes over both conjuncts, the non-SA coordinated configuration allows for both readings. The paraphrase in (28-ii) indicates that *herhalde* ‘probably’ can also be interpreted strictly as a modifier of the first conjunct. Note that in this context all the inflectional morphology is present on both conjuncts, suggesting a higher level of coordination. That this reading is unavailable in (27b) I interpret as evidence that the conjuncts in SA contexts are below the TP level.

- (28) Siz herhalde Ayshe’den nefret et-**ti-niz** ve Zeynep’i sev-**di-niz**.
 you probably Ayshe-Abl hate-Past-2pl and Zeynep-Acc love-Past-2pl
 = (i) ‘You probably hate Ayshe, and you probably love Zeynep.’
 = (ii) ‘You probably hate Ayshe, and you (perhaps, definitely) love Zeynep.’

The deductions above are congruent with Kornfilt’s and Kelepir’s conclusion that SA is possible only with participial forms. Such forms are by definition above the VP-level, since they require the addition of an aspectual marker, which, as Kelepir proposes, heads its own projection above V. My diagnostics hence constitute independent evidence for the validity of their findings.

The final observation concerns the parallelism of conjuncts. In order to coordinate and suspend the affixes, the conjuncts must be of the same type – i.e., they have to appear with the same participial affix. Consider the unacceptable examples in (29). Though independently possible in SA configurations, as (29b) and (29d) demonstrate, the affixes do not mix and match: it is impossible to have one conjunct with a perfective marker and the other with a future marker, as in (29a); or one conjunct with a perfective marker and the other with a progressive marker, as in (29c).

- (29) a. *[çok çalış-mış ve başar-acağ]- Ø-ız
 much work-Perf and succeed-Fut-Cop-1pl
 Intended: ‘We had worked hard and will succeed.’
 b. [çok çalış-mış ve başar- mış]- Ø-ız
 much work-Perf and succeed-Fut-Cop-1pl
 ‘We had worked hard and had succeeded.’
 c. *[çok oku-muş ve şimdi yaz-ıyor]- Ø-uz
 much read-Perf and now write-Prog-Cop-1pl
 Intended: ‘We read a lot and now we’re writing.’
 d. [çok oku-yor ve şimdi yaz-ıyor]- Ø- uz
 much read-Prog and now write-Prog-Cop-1pl
 ‘We are reading a lot and now we’re writing.’

The discussion in this section leads us to the following conclusions. First, Turkish prohibits coordination of bare verbal stems in SA environments with the coordinator *ve*. This I construed as an indication that coordination obligatorily takes place at a level higher than VP. Second, based on the scope proper-

ties of adverbs, it was established that the conjuncts are below the TP level. Finally, I demonstrated that the conjuncts must obey a parallelism requirement in order to be eligible for SA.

This concludes the description of empirical issues pertaining to SA. With all these descriptive matters settled, we are left with the following aggregate of facts to account for: (1) the morphological and feature make-up of conjuncts; (2) the type of agreement markers they select for; (3) the prohibition against bare verbal forms; (4) the parallelism requirement; (5) the height of coordination. These will be the focus of the next section.

3. Analysis

Before I proceed with an exposition of my arguments, I will delineate a set of assumptions adopted in the ensuing discussion. Following Kural (1993, 1997), Kornfilt (1998), and Şener (2012), I am rejecting the Kayne-style approach, which maintains that all languages are underlyingly left-headed. The SOV order of Turkish is derived via leftward movement in the Kaynean framework. Under such an approach no rightward movement is allowed and “extraposed” constituents are taken to be base-generated. This point is contested in the cited works of Kural and Kornfilt. On the basis of scope interactions between post-verbal constituents and preverbal quantifiers, Kural (1993, 1997) demonstrates that head-final structures are more consistent in deriving those scope interactions. Kornfilt (1998) supplies additional evidence in favor of this conclusion. Therefore, I will assume that Turkish is SOV underlyingly and that rightward operations are licensed in this language.

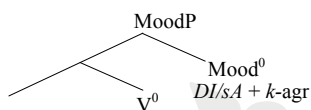
I also assume Baker’s (1985: 375) Mirror Principle, which maintains that “morphological derivations must directly reflect syntactic derivations (and vice versa)”. Thus, the order of morphemes should replicate the order of syntactic operations. Following Grimshaw (1986), who in turn relies on Williams’s (1981) theory of heads, I take for granted the idea that affixes trigger operations only if they occupy head positions.

With the two assumptions above, then, I posit an underlying SOV order in Turkish with licit rightward movement operations. I further assume that relevant affixes head their own projections in syntax. The surface morphological sequence is taken to represent the order of syntactic operations. With those preliminary assumptions made explicit, I spell out the details of my analysis. The next section concentrates on the mechanics of the proposal. The subsequent subsections provide evidence in support of this account.

3.1. First approach

First consider the “true” verbal forms of the type $V+DI/sA$. The elements $-DI/-sA$ head MoodP. As mentioned earlier, the “true” verbal affixes obligatorily take k -paradigm agreement, which is inseparable from its host. This is in line with Good and Yu’s conclusion that k -paradigm agreement markers are affixes. This suggests that the agreement markers are generated in the same Mood head. The proposed structure is shown in (30):

(30)

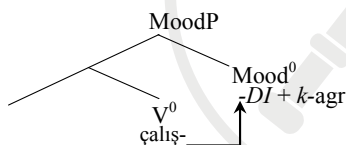


With this basic structure in place, consider how (31) is derived.

- (31) çalış-tı-k
work-DI-1pl
'We worked.'

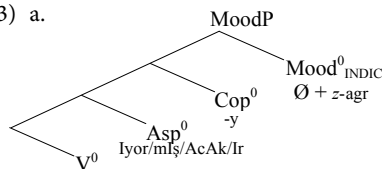
Following Keleşir, I assume that the element generated in V is [+verbal]. This element is a bare verbal stem. $Mood^0$ contains $-DI$ (traditionally analyzed as T^0) and an agreement marker. V^0 undergoes head movement to $Mood^0$ as shown in (32). The V^0+Mood^0 complex *çalış-DI-k* is sent off to PF, which takes care of vowel harmony and voicing assimilation, with the surface result in (31).

(32)

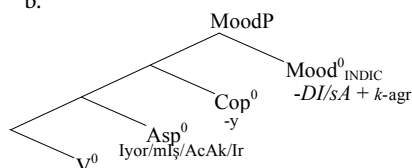


Participial forms of the type $V+Iyor/mİş/AcAK/İr$ have an additional projection between VP and MoodP – Asp(ect)P. I will return to the arguments for the aspectual nature of the participial affixes. For the time being it will suffice to consider the basic mechanism underlying the derivations of “fake” verbal forms. Again, following Keleşir, I assume that V^0 moves to Asp^0 . This process renders the resulting V^0+Asp^0 -complex [–verbal]. This necessitates the merge of a copula, a [+verbal] element. We now have two options shown – either (33a) or (33b). $Mood^0$ is either of the null type, as in (33a) with z -paradigm agreement, or of an overt type, as in (33b) with k -paradigm agreement:

(33) a.



b.

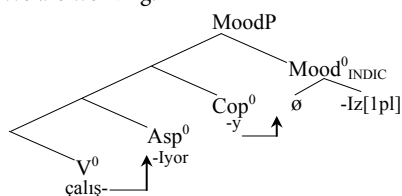


Consider now the sample derivations in (34). (34a) evinces the derivation in which the Mood⁰ is null. V⁰ *çalış* ‘work’ raises to the Aspect-head. The resulting string *çalışıyor* ‘working’ is not subject to any further movements, since the complex is [-verbal]. Next the copula is merged. It is [+verbal], so it adjoins to Mood⁰. The result *çalışıyor y-ø-Iz* feeds the phonological component, where the copula is deleted and vowel harmony takes place. This yields the surface string *çalışıyoruz* ‘we are working’. Observe also that in such situations it is impossible to have a free standing copula complex – i.e., **çalışıyor iyiz* is unacceptable.

In (34b) the first step is identical to (34a) – V⁰ raises to Asp⁰. The copula moves to Mood⁰. Phonology receives the following input: *çalışıyor y-DI-k*. There are now two possible options for Spellout. Either the input is reanalyzed as one word, triggering vowel harmony and glide deletion, in which case the result is *çalışıyorduk*; or it is realized as two words, the second being the free-standing copula + agreement complex. In the latter case no vowel harmony takes place between the copula + agreement complex and the preceding progressive affix, resulting in a surface realization *çalışıyor idik*.

(34) a.

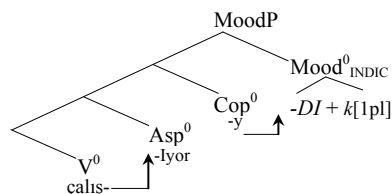
çalış-ıyor-ø-uz
work-Prog-Cop-1pl
‘We are working.’

= *çalışıyoruz*, but **çalışıyor iyiz*

b.

çalış-ıyor-du-k
work-Prog-DI-1pl
‘We used to work.’

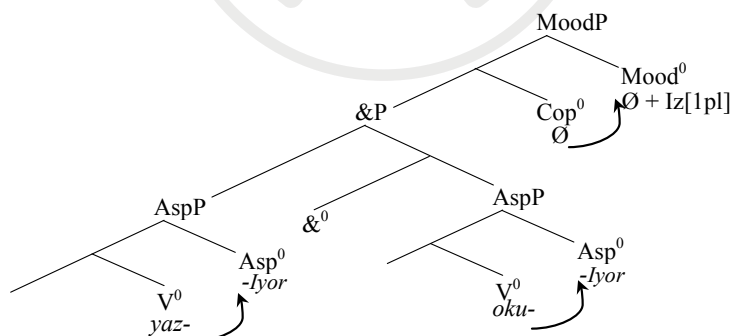
= *çalışıyorduk* or *çalışıyor idik*



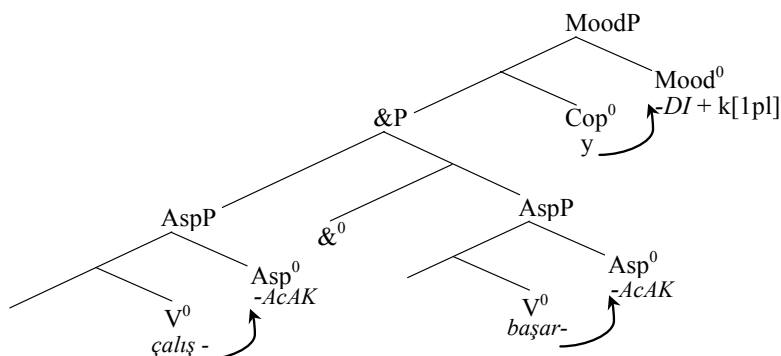
It is now possible to explore the mechanisms implicated in basic SA-derivations. If my line of reasoning is correct, the SA facts follow directly from the proposal above. The two participles can be coordinated at the AspP level. The impossibility of lower coordination hinges on compliance with the CSC. Suppose that we attempted to coordinate two VPs. The head of one of the conjuncts, being a [+verbal] element, would have to move to pick up an aspectual marker, violating the CSC. This explains the ungrammatical instances in (26) and leads us quite naturally to the conclusion that the lowest possible level of conjunction is AspP, as in (35a). All the familiar movements take place – V⁰ raises from each conjunct to its respective Asp⁰. The copula takes &P as its complement. The copula is the [+verbal] element subject to head movement. Therefore, it adjoins to Mood⁰. In phonology the structure is parsed into three words: #yaz-**Iyor**# #ve# #ok-**Iyor**-y-ø-**Iz**#, whereby the second conjunct is reanalyzed as one word. The usual phonological rules (vowel harmony and glide deletion) apply.

The derivation involving the overt Mood head proceeds in a similar fashion, as sketched in (35b), with the caveat that the second conjunct contains an element that can be reanalyzed as two words in PF.

- (35) a. [yaz-**Iyor** ve ok-**uyor**]-ø-**uz** =yazıyor ve okuyoruz, *but*
 write-Prog and read-Prog-Cop-1pl *yazıyor ve okuyor *iyiz*
 'We are reading and writing.'

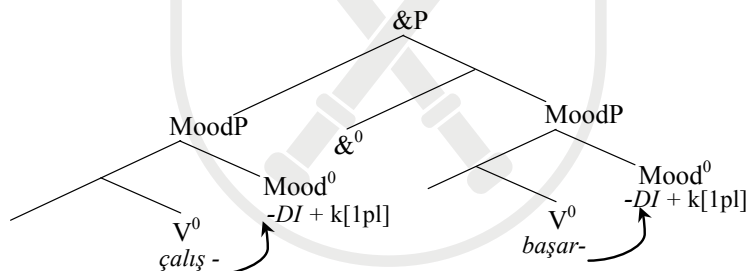


- b. [çalış-**acak** ve başar-**acak**]-Ø-**tı-k** =çalışacak ve başaracaktık *or*
 work-Fut and succeed-Fut-Cop-Past-1pl çalışacak ve başaracak *idik*



Turning now to the distribution of “true” verbal forms, consider (36). For the reasons stated above, it is impossible to coordinate the elements at the VP level (the head of the second conjunct must move, which would violate the CSC). Thus, the only plausible level of coordination is MoodP, as in (36). Now the verb from each conjunct is free to move to its respective Mood⁰. Recall that the latter contains both the mood-marker (-DI/-sA) and the affixal agreement morphology. Since the agreement marker is inseparable from its host, it is now clear why the suspension of the agreement affix is impossible.

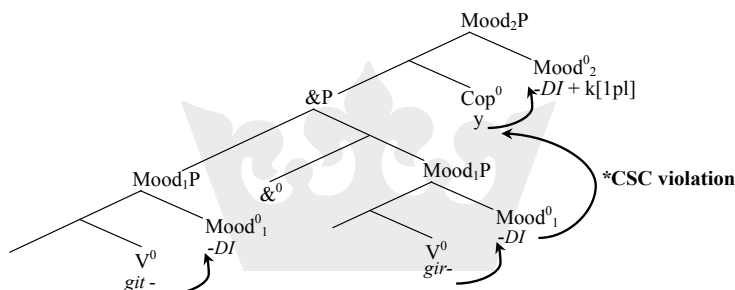
- (36) * [çalış-tı ve başar-dı]-k
 work-Past and succeed-Past-1pl



Finally, there is enough technology to deal with Kabak’s troublesome paradigm in (19). Recall that his ungrammatical examples involve “true” verbal forms followed by a copula (schematically of the form: V+DI/sA – Cop – DI/sA). Despite the presence of a copula, the affixes following this copula cannot suspend. Observe now how his ungrammatical example in (19a), repeated below as (37a), is ruled out under my account. -DI and -sA head MoodP. The lower Mood_i takes VP as its complement. The verb in each conjunct raises to Mood_i. The resulting V + Mood complex is [+verbal], unlike its [-verbal] V + Aspect counterpart in (35). It is, therefore, subject to subsequent head

movement. However, this obligatory raising of V + Mood to Cop⁰ violates the CSC. Therefore, SA is impossible in (37a). The combination of obligatory head movement and the CSC, in effect, forces the conjunction at the higher level – i.e., at the level of sentential mood, Mood₂P. This is precisely the desired result. The only possible way to coordinate the verbs in (19b = 37b) is by spelling out the entire sequence of inflectional elements on each conjunct.

- (37) a. *O yaz [Avşa-ya [git-ti ve deniz-e gir-di]-y-di-k.
that summer Avsha-Dat go-DI and sea-Dat enter-DI -Cop-DI-1pl



- b. O yaz Avşaya git-ti-y-di-k ve denize gir-di-y-di-k.
that summer Avsha go-DI-Cop-DI-1pl and sea enter-DI-Cop-DI-1pl
'That summer we went to Avsha and swam in the sea.'

The analysis sketched above captures the SA facts in a straightforward way. Participial forms are complex, derived as a result of V⁰-to-Asp⁰ movement. Since these complexes are [-verbal], they are allowed to stay in-situ and coordinate. “True” verbal forms originate from V⁰-to-Mood⁰ movement. They are [+verbal], hence, subject to head-movement. Therefore, they cannot coordinate at the level of VP or lower MoodP, since any subsequent movement will violate the CSC. This is summarized in Table 5.

Table 5: Analysis – intermediate summary

	“Fake” (participial) forms:	“True” verbal forms:
Form:	V+Iyor/mİş/AcAk/İr	V+DI/sA
Syntax:	[_{AspP} [_{VP} t _V] V ⁰ +Asp ⁰]	[_{MoodP} [_{VP} t _V] V ⁰ +Mood ⁰]
Features:	V ⁰ +Asp ⁰ = [-verbal]	V ⁰ +Mood ⁰ = [+verbal]
Subject to head movement:	No	Yes
Agreement morphology:	Mood ⁰ (either <i>k</i> - or <i>z</i> -paradigm)	Mood ⁰ (<i>k</i> -paradigm)

Though my analysis successfully explains the SA facts, it also invites a few questions. First, I will need to provide some evidence for my claims that *-DI* is indeed the locus of mood/modality rather than tense. Second, some justification is necessary for the treatment of agreement affixes as a fused Mood + Agr head as opposed to a separate Agr-head. Note that this proposal goes against Pollock's split-Infl hypothesis (which has been adopted for Turkish in Erguvanlı Taylan 1996 and Tosun 1996). Finally, it is necessary to account explicitly for the phonological effects, whereby in some cases the Cop + Mood + Agr complex has the option of either being spelled out as a free standing word or as an affix on the nearest conjunct, while in others it has to be obligatorily reanalyzed as one word with the nearest conjunct. These three issues will be discussed in turn in the ensuing sections.

3.2. Why no T⁰?

In this section I defend the position that *-DI*, *-sA*, and in certain contexts *-mİş* are not generated under T⁰ (since there is no TP). The distribution and interaction of those morphemes, instead, points to an analysis under which these elements are treated as the locus of Mood/Modality. In simplified terms, *-sA* is understood as the realization of conditional (and this point seems to be uncontroversial). *-DI* and the *-Ø* (the latter of the type in (34a)) encode indicative modality; while *-mİş* – inferential modality.³ For ease of reference, I will

³ An anonymous reviewer raises an objection concerning the past interpretation ostensibly available for the suffixes *-DI* and *-mİş*, citing the following paradigm from Sezer (2001: 11):

- (i) Ali dün ev-de-ymiş
Ali yesterday home-Loc-INF.PAST2.3SG
'It turns out that Ali was at home yesterday.'
- (ii) Ali şu anda ev-de-ymiş
Ali this moment home-Loc-INF.PAST2.3SG
'It turns out that Ali is at home now.'
- (iii) Ali yarın ev-de-ymiş
Ali tomorrow home-Loc-INF.PAST2.3SG
'It turns out that Ali will be at home tomorrow.'

Note that in these examples, a particular temporal interpretation correlates with the presence of an adverb. It is not surprising, therefore, that the strings containing deictic temporal adverbs like *dün* 'yesterday', *şu anda* 'this moment' and *yarın* 'tomorrow' are construed as past, present and future, respectively. In the absence of specific adverbial markers, the immediate reading that arises in conjunction with this paradigm is simply inferential (whereby the temporal restriction is purely a function of pragmatics). A similar observation is made in Yavaş (1980: 74) with respect to future interpretation.

Admittedly, the situation with *-DI* is less clear. One possibility suggested to me by the reviewer is to encode the temporal specification ([+past]) on the morpheme itself. Another possibility is to tie tense to modality: in this case, the former would be parasitic on the latter; with *-DI* specified for witnessed modality and past tense, but *-mİş* only for inferential (tense is underspecified, as the paradigm in (i)–(iii) demonstrates).

assume that the following terminology for the latter two affixes: \emptyset and *-DI* will be referred to as [–inferential], and *-mİş* as [+inferential].

As a first approximation consider the range of possible affix stacking in Turkish: (38) demonstrates the distribution of *-sA*, when it is closest to the V, (39) the behavior of *-DI*, and (40) – of *-mİş*.

- (38) a. V+sAk
 b. V+sAy-mİş+Iz
 c. V+sAy-DIk or V+sAk-DI
 d. *V+sAysAk
 e. *V+sA idiy+sem
 f. *V+sA imiş+sem
- (39) a. V+DIk
 b. V+DIy-dIk or V+DIk+dI
 c. V+DIy-sAk or V+DIk+sA
 d. V+DI idiy+sek or V+DIk idiy+se
 e. *V+DI imiş+iz or *V+DIymİş+Iz
 f. *V+DI imiş+sek or *V+DIymİş
- (40) a. V+mİş+Iz
 b. V+mİş+DIk
 c. V+mİş+sAk
 d. V+mİş idiy+sek
 e. V+mİş+Imİş+Iz
 f. V+mİş+Imİş+sAk

From the paradigms above we obtain the following generalizations. First, the conditional affix *-sA* can only appear once per clause. The two suffixes *-mİş* and *-DI* can stack on *-sA*, as below:

- (41) a. gör-se-m
 see-sA-1sg
 ‘if I see’
 b. gör-sey-miş-im
 see-sA-Infer-1sg
 ‘(they say) if I were to see’
 c. gör-sey-di-m
 see-sA-Indic-1sg
 ‘if I has seen’
 d. *gör-sey-se-m
 see-sA-sA-1sg

The suffix *-DI*, traditionally analyzed as encoding past tense, can be followed only by *-DI* or *-sA*, but crucially not by *-mİş*. If, as I propose, *-DI* instantiates [–inferential] and *-mİş* [+inferential], this prohibition against the *DI + mİş* combination follows directly: it is simply the case that the two modalities are incompatible in a single proposition.

- (42) a. gör-dü-k
see-DI-1pl
'we saw'
b. gör-düy-dü-k
see-DI-DI-1pl
'we really saw'
c. gör-düy-se-k
see-DI-Cond-1pl
'if we saw'
d. *gör- düy-müş-üz
see-DI-mİş-1pl

Finally, *-mİş* can combine with all three affixes. So, the following combinations are all acceptable: *mİş+sA*, *mİş+DI*, *mİş+mİş*, as shown in (43). Superficially, the penultimate variant contradicts the claim above about the incompatibility of distinct modalities in a single clause. Why should it be the case that the combination *DI+mİş* be illicit, but the permutation of this complex (i.e., *mİş+DI*) is perfectly acceptable? The reason for this split lies in the dual nature of *-mİş*: when generated in the lower positions it is obligatorily interpreted as an aspectual marker (perfective), when generated in higher positions, it is interpreted as a modality marker (inferential). The combination *mİş+DI* expresses something like past perfect or, on my analysis, a perfectly-marked indicative modality, which contrasts with *mİş+mİş* in that the latter instantiates inferential modality.

- (43) a. gör-müş-üz
see-Infer-1pl
'reportedly, we have seen'
b. gör-müş-tü-k
see-Perf-DI-1pl
'we had seen'
c. gör-müş-se-k
see-Perf-Cond-1pl
'if we have seen'
d. gör-müş-müş-üz
see-Perf-Infer-1pl
'we have allegedly seen'

Keleşir (2001) provides independent evidence for this treatment of *-mİş*. Consider her paradigm in (44a-b). Here, the suffix *-mİş* obligatorily realizes inferential meaning. Observe that this is because it is generated *above* the copula (so it is a modality marker here, not an aspectual marker). This copula is obligatory in contexts like (44), since the adjective, being [–verbal], cannot take verbal affixes directly and needs an intermediary of the [+verbal] copula. In (44a), under my account, *-mİş* is generated in Mood⁰ with a specification [+inferential]. Similarly, in (44b) the suffix *-DI*, endowed with the feature

[– inferential], takes CopP as a complement. Because there is no way for *-mİş* to be interpreted as a perfective marker in environments like (44), we explain the ungrammaticality of (44c-d): the two modalities [–inferential] and [+inferential] are incompatible in a single proposition.

- (44) a. *Hasta-y-mış.*
 sick-Cop-Infer
 ‘Apparently, he was sick.’
 b. *Hasta-y-dİ.*
 sick-Cop-Indic
 ‘He was sick.’
 c. **Hasta-y-mış-tİ*
 sick-Cop-Infer-Indic
 d. **Hasta-y-dİ-mış*
 sick-Cop-Indic-Infer

From the discussion above, I conclude that the three affixes under consideration are mood or modality markers. The exception to this generalization is *-mİş*, which exhibits the dual behavior of a modal or an aspectual element depending on its position in the structure (for a similar treatment of *-mİş* see Slobin and Aksu 1982). Unlike *-mİş*, the rest of the “fake” verbal affixes – *-AcAK*, *-Ir*, and *-Iyor* – realize a single function. They are aspectual markers (see also Yavaş 1980, 1982a, 1982b; Giorgi and Pianesi 1997; Erguvanlı Taylan 1996). While the status of the latter two affixes as aspectual markers appears to be uncontroversial, the status of *-AcAK* is a little less clear. It is either understood as a temporal marker, expressing future reference (implicitly in Sezer 2001), or as an entity realizing a dual function of “a pure Future tense” and “a Prospective aspect” (Cinque 2001: 53). Following Yavaş (1980), who argues against the analysis of *-AcAK* as a pure future tense marker and instead defends the position that this affix is solely an instantiation of “presumptive modality”, I treat *-AcAK* as a strictly aspectual element, similar in meaning to the English modal *will*. In a variety of works the latter is analyzed as an auxiliary generated under a particular functional projection *WOLL* sandwiched between TP and AspP (Dowty 1979; Kaufman 2005; Matthewson 2006 and references therein;⁴ but see Bennett and Partee 1978; Comrie 1982, 1985; Hornstein 1990, a.o.). Though it is beyond the scope of this paper to delve into particular semantic implementations of the observed idiosyncrasy of this “future” affix, it should be noted that my proposal to generate *-AcAK* in Asp⁰ is compatible with the semantics articulated for *WOLL* in Cable (2008), for whom the latter is akin to aspect. Given this, (45) should be construed strictly as a shorthand for the

⁴ The particulars of the implementation differ in the cited papers, but crucially for my point, the authors concur that *will* should not be equated with tense. In fact, Matthewson (2006) endorses a strong claim that “future is never itself a tense” (2). She further argues that this statement applies not only to her language of analysis, St’át’imcets, but universally.

meanings of the aspectual affixes, not meant to capture the full semantic complexity thereof.

- (45) a. *-mİş* Perfective
 b. *-AcAK* Inceptive
 c. *-Ir* Habitual
 d. *-Iyor* Progressive

So far I argued for the following: *-sA* invariably realizes conditional mood, *-DI* invariably realizes indicative modality, *-mİş* is ambiguous between an aspect marker and an inferential modality marker (its function is determined contextually), and *-AcAK*, *-Ir*, *-Iyor* are invariably aspectual markers.

With this system in place, it is unsurprising that any one of the four aspectual markers can precede any mood/modality markers, as shown in (46).

- | | | | |
|---------|-----------------------------------|------------------------------------|--|
| (46) a. | gör-müş-tü-k
see-Perf-DI-1pl | gör-müş-se-k
see-Perf-sA-1pl | gör-müş-müş-üz
see-Perf-Infer-1pl |
| b. | gör-ecek-ti-k
see-Incep-DI-1pl | gör-ecek-se-k
see-Incept-sA-1pl | gör-ecek-miş-iz
see-Incep-Infer-1pl |
| c. | gör-ür-dü-k
see-Hab-DI-1pl | gör-ür-se-k
see-Hab-sA-1pl | gör-ür-müş-üz
see-Hab-Infer-1pl |
| d. | gör-üyor-du-k
see-Prog-DI-1pl | gör-üyor-sa-k
see-Prog-sA-1pl | gör-üyor-muş-uz
see-Prog-Infer-1pl |

An additional benefit of my account is that it preserves the TMA-hierarchy, which maintains that the order of Mood>Tense>Aspect elements is universally specified. I take cartographic approaches (along the lines of Cinque (1999); Cinque (2001); Cinque and Rizzi (2008)) as a convenient heuristic for determining the relative height of the elements. Under these accounts, the epistemic modality scopes over the entire proposition, which, in turn, includes tense specification.⁵ This means that the order must comply with the following scheme: epistemic mood > tense > aspect. All the combinations in (47) obey this hierarchy:

- (47) a. V+Aspect+Mood = (46)
 b. V+Mood₁+Mood₂ = (42b), (41c)
 c. *V+Mood+Aspect = predicted to be impossible under my account

This is not the case under analyses where *-DI* is generated in T⁰, since they incorrectly rule in (48). If *-DI* is an instantiation of tense and *-mİş* of epistemic modality (inferential), then the string is predicted to be acceptable, contrary to

⁵ In fact, Cinque (2001: 52) articulates the following order specifically for Turkish: Mood_{EVAL} > Mood_{EVIDENTIAL} > Mood_{EPISTEMIC} > T_{PAST} > T_{FUT} > Mod_{ALETHIC} > ASP_{PERFECT} > ASP_{PROG} ... > V. It is also worth pointing out here that Cinque explicitly proposes to treat *-mİş* and *-DI* as tense markers in certain contexts. Note that the problem in (48) persists for this analysis.

fact. Observe that this problem does not arise under my proposal, since both elements are treated as mood/modality elements (i.e., they occupy the same level on the hierarchy: their incompatibility is due to conflicts in semantics).

(48)	*Gör	-düy	-müş	-üz
	see	-DI	-mİş	-1pl
		T	Modality _{INFER}	[-DI in T ⁰]
		Modality _{IND}	Modality _{INFER}	[-DI and mİş as modality markers]

Finally, Kornfilt's observation (reported in (9) and repeated in (49) below with modified glosses) regarding the impossibility of epistemological copula with "true" verbal forms follows directly from my analysis. In (49b) the modal suffix *-DI* is incompatible with another epistemic marker. The situation in (49), therefore, is quite similar to what we have already observed above for the combination of *DI+mİş*.

- (49) a. Gid- ecek- tir
 go- Incep- EpCop
 'She will probably go.'
- b. *Git- ti- dir.
 go- Mood_[INDIC] EpCop
 Intended: 'She probably went.'

In this section I argued that the "true" verbal markers are invariably generated in the head of MoodP. The suffix *-mİş* either heads a MoodP or an AspP. All the rest of the "fake" verbal affixes are aspectual markers. This treatment allows us a natural explanation for the possible combinations of affix stacking (along with the theory-internal side benefit of preserving the TMA-hierarchy).

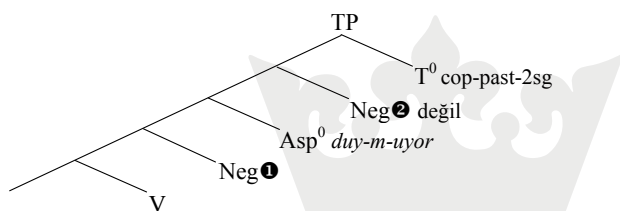
3.3. Why no Agr?

This section investigates the agreement markers' properties. I show that there is no evidence for a separate Agr-projection in Turkish and that agreement morphology is generated on the Mood-head. The arguments that I will invoke in defense of this claim have to do with the distribution of the negator *değil*, the behavior of certain verbal forms in embedded environments, the optional spell-out of agreement, and the interaction of agreement morphology with question particles.

Keleşir (2001), contra Kornfilt (1996), argues that *değil* is not a nominal negator, rather it is a sentential one. Consider (50) and (51). There are two negators: the lower verbal one *-mA* and the higher sentential *değil*. Crucially, the agreement morphology must appear on the higher sentential negator (rather than a participle). Under Keleşir's account, V⁰ raises to Asp⁰ picking up Neg₁ on the way. The resulting complex is ineligible for further movement; there-

fore, it cannot host agreement affixes, which are generated in T^0 along with a copula. *Değil* then becomes the only available host for inflection in (50a) and (51).

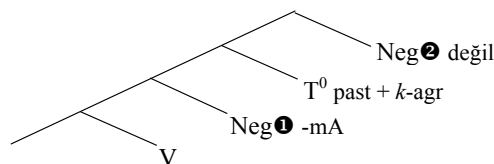
- (50) a. Ben gel-me-yecek değil-im.
I come-neg-Incep not-1sg
'It is not the case that I won't come.'
- b. *Ben gel-me-yecek-im değil.
I come-neg-Incep-1sg not (Kelepir 2001: 28)
- (51) Duy-mu-yor değil-di-m.
hear-neg-Incep not-Past-2sg (Kelepir 2001: 51)



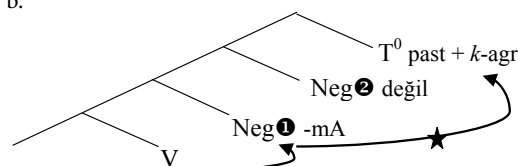
Though Kelepir provides examples like (52), she does not explicitly discuss them. Here, the agreement must be spelled out on the “true” verbal affix. Presumably, to derive (52b), Kelepir would need to assume that Neg_2^0 is generated higher than TP in situations where verb movement is compulsory such as (53a) – a fairly *ad-hoc* approach. If one, however, wishes to preserve uniformity in structural relations and generate Neg_2^0 below TP, as in (53b) (so replicating (51)), one would run into a Head Movement Constraint violation, whereby the $V+Neg_1^0$ would have to skip over the higher Neg -head on its way to T^0 .

- (52) a. *Ben gel-me-di değil-im.
I come-neg-DI not-1sg
- b. Ben gel-me-di-m değil.
I come-neg-DI-1sg not
'It is not the case that I didn't come.'

(53) a.

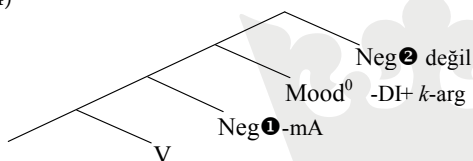


b.

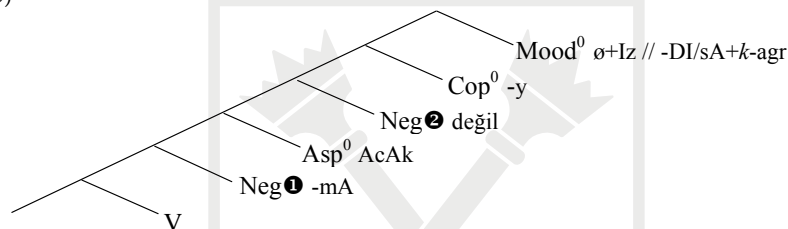


Under my analysis no such arbitrary solutions are necessary. The *-DI*-type suffixes are obligatorily fused with agreement morphology. In fact, agreement is generally associated with a Mood head. The structure in (54) gives us (52), while the structure in (55) derives (50) and (51). As argued above, *-DI* in (52)/(54) is invariably generated in the Mood-head with fused Agr suffixes, which, then, must be spelled out. In (55) the *değil*-negator is merged with the copula. This is congruent with Kornfilt's insight that this element normally serves as a nominal negator, used to negate nouns and adjectives. I suggest that this is accomplished via the intermediary of a copula. The agreement elements in (55) are generated in the higher Mood-head exactly like in (34).

(54)



(55)



The next argument for agreement fusion comes from the behavior of verbal forms in embedded contexts. Recall from Section 2.2 that the ungrammaticality of examples like (56a) is explained by the feature composition of participial forms, which are $[-\text{verbal}]$. Recall also that *-DIK-*, being a nominalizing morpheme, obligatorily selects a $[\text{+verbal}]$ element. Therefore, (56a) is impossible. I then observed that though (56b) is $[\text{+verbal}]$, it is still illicit in nominalizing embeddings. Now the reason for the status of (56b) should be clear: it has a suffix, which is fused with agreement morphology, but only non-agreeing forms can nominalize.

- (56) a. *Fatma [Ayşe'nin gid-iyor-diğ] -in-i bil-iyor. =(16)
 Fatma [Ayşe-Gen go-**Prog-Nom**]-3sg-Acc know-Prog3sg
 b. *Fatma [Ayşe'nin git-ti-diğ] -in-i bil-iyor.
 Fatma [Ayşe-Gen go-**Past-Nom**]-3sg-Acc know-Prog3sg

Another argument for the fusion of Agr-markers with mood affixes is the optional spellout of agreement morphology (also noted in Good and Yu (2000b) with a different explanation). As shown in (57) repeated below from (39b-d), some forms realize their morphology either on the first Mood⁰ or

on the second. That is because both forms carry agreement markers, and so it is possible to spell them out on either head. Note that no semantic effects follow from this variation. The paradigm in (57) holds of *-sA* as well. It does not, however, hold of the participial forms (which I analyze as aspectual markers). This is predicted: they do not carry agreement, and, hence, require a copula+inflected Mood-head.

- (57) a. V+DI_y-dIk or V+DI_k+dI =(39b-d)
 b. V+DI_y-sAk or V+DI_k+sA
 c. V+DI idi+sek or V+DI_k idiy+se
- (58) Git-tiy-dik **or** git-tik-ti
 go-Mood₁-**Mood₂+Agr** go-Mood₁+Agr -Mood₂
 ‘We had gone’

The concluding observation for this section is again due to Good and Yu (2000b) (also noted in Kornfilt 1996 and Kelepir 2001, see also Kahnemuyipour and Kornfilt 2010). It concerns the interaction of Q-particles with agreement morphology. Descriptively the generalization is this: Q precedes *z*-paradigm affixes, but follows the *k*-paradigm affixes.

The paradigm in (59) is predicted on my account: the affixal morphology cannot be separated from its Mood⁰-host by a Q element as in (59b). The Cop+Mood+Agr complex is, however, free to appear after the Q-particle, splitting the V+Asp complex from its “agreement” markers.

- (59) a. Git- **ti+k-** mi?
 go- **Mood+1pl-** Q
 ‘Did we go?’
- b. *Git- **ti** mi-k?
 go- **Mood** Q-Agr
- c. Gid-iyor mu-Ø-yuz?
 go-Prog Q-Cop-1pl
- d. ?*Gid-iyor-Ø-uz-mu?
 go-Prog-Cop-1pl-Q

I take the aggregate of facts above to indicate that there is no evidence for an independent Agr projection. Chomsky (1995) argues for the elimination of Agr from UG on the grounds that Agr, unlike other functional categories he considers – T, C, and D – is devoid of Interpretable features and hence provides no instructions for the interface levels (349). Hence my conclusion, informed by empirical considerations, is in line with this theoretical desideratum.⁶

⁶ An obvious question arises in conjunction with the proposal above: what is the status of nominative case in Turkish? Bošković (2013) articulates a number of alternatives. In the absence of TP, he suggests, AgrP could be responsible for nominative case assignment (an option he explicitly entertains for Turkish). For treatment of nominative case in Turkish along those lines see also George and Kornfilt (1981), Kornfilt (1984, 2005, 2006). Kornfilt (2003), e.g., argues that

3.4. What happens in PF?

Before I proceed with the presentation of my analysis of PF-phenomena, I must limit the scope of the upcoming discussion. This section will only deal with a subset of possible forms, so only the issues summarized in Table 6 will be scrutinized in some detail (for the purposes of this project, I put aside some of the complex periphrastic forms found in Turkish):

Table 6: Scope of PF-issues

	Form	Spellout possibilities
(1)	[V+Aspect] – Cop+[_{Mood} ∅ +z-paradigm]	One prosodic word only
(2)	[V+Aspect] – Cop+[_{Mood} -mİş +z-paradigm]	One word or two prosodic words (with a free standing copula complex)
(3)	[V+Aspect] – Cop+[_{Mood} -DI +k-paradigm]	One word or two prosodic words (with a free standing copula complex)
(4)	[V+Aspect] – Cop+[_{Mood} -sA +k-paradigm]	One word or two prosodic words (with a free standing copula complex)
(5)	[_{Mood1} V+Mood ₁] – Cop+[_{Mood2} -DI/sA +k-paradigm]	One prosodic word only

Let us now consider each entry in Table 6 in turn. The first one is linked to examples like (60). The unacceptable instances in (60a–b) involve a free-standing copula complex. These forms are obligatorily reanalyzed as one prosodic word as in (60c–d).

- (60) a. *çalış-ıyor **i-∅-yim.**
 work-Prog Cop+∅_{MOOD} +1sg
 ‘I am working.’
 b. *çalış-acak **i-∅-yim.**
 work-Incep Cop+∅_{MOOD} +1sg
 ‘I will be working.’
 c. çalış-ıyor-∅-∅-um.
 work-Prog-Cop+∅_{MOOD} +1sg
 ‘I am working.’

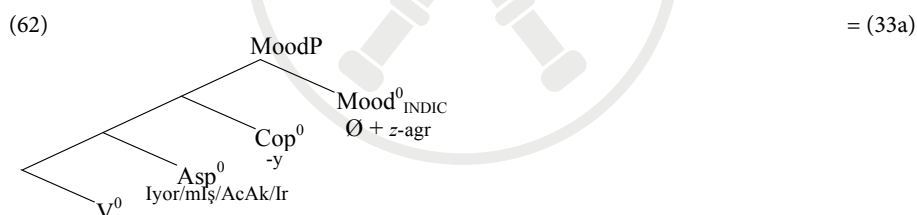
“*genuine subject case* [Nominative and Genitive] is licensed by a designated Case licenser; for Turkish this is the overt Agr(eement) marker” (129) (the default case assignment strategy and caseless subjects are claimed to be available in Turkish as well). Bošković in fact also suggests nominative as default case as a viable option. Though solving this issue in any coherent detail is well beyond the scope of this paper, I conjecture what a plausible alternative could look like. Since structural case is tied to the presence of agreement (an observation a number of scholars converge on) one could reasonably suggest that structural case is licensed by the agreement-bearing element (MoodP if I am correct).

- d. çalış-acağ-Ø-Ø-im.
work-Incep-Cop+Ø_{MOOD}+1sg
'I will be working.'

The same facts obtain in an SA complex, as shown in (61). Much like their non-coordinated counterparts, the forms below disallow the free-standing copula complex. Hence, it is subject to obligatory reanalysis with the nearest conjunct.

- (61) a. *oku-muş ve yaz-mış i-Ø-yim.
read-Perf and write-Perf Cop+Ø_{MOOD}+1sg
'I have read and written.'
- b. *oku-yor ve yaz-ıyor i-Ø-yim.
read-Prog and write-Prog Cop+Ø_{MOOD}+1sg
'I am reading and writing.'
- c. oku-muş ve yaz-mış-Ø-Ø-im.
read-Perf and write-Perf-Cop+Ø_{MOOD}+1sg
'I have read and written.'
- d. oku-yor ve yaz-ıyor-Ø-Ø-um.
read-Prog and write-Prog-Cop+Ø_{MOOD}+1sg
'I am reading and writing.'

I have argued that the structures in (60)/(61) are derived as shown in (62) (repeated from (33a)). The copula merges with a zero Mood head, which is fused with *z*-paradigm agreement. The reason for the obligatory cliticization to the nearest host, I propose, is due to the lack of phonological support on the Mood⁰ in that neither the copula nor the *z*-paradigm endings can bear independent stress (Lewis 1967; Kornfilt 1996).



However, if Mood⁰ is overt, the copula complex *can* surface as a free-standing prosodic form, since the elements following the copula are eligible stress bearers:

- (63) a. yaz-mış i-miş-im.
write-Perf Cop+Infer+1sg
'I have apparently written.'
- b. yaz-mış i-di-m.
write-Perf Cop+Indic+1sg
'I have written.'

- c. yaz-mış-Ø-miş-im.
write-Perf-Cop-Infer-1sg
'I have apparently written.'
- d. yaz-mış-Ø-tı-m.
write-Perf-Cop- Indic-1sg
'I have written.'

Likewise, the facts in SA contexts follow the pattern of non-coordinated environments in that both the free-standing copula+Mood+Agr complex in (64a-b) and the cliticized affixes in (64c-d) are possible:

- (64) a. oku-muş ve yazmış **i-miş-im**.
read-Perf and write-Perf Cop+Infer+1sg
'I have apparently read and written.'
- b. okumuş ve yazmış **i-di-m**.
read-Perf and write-Perf Cop+Indic+1sg
'I have apparently read and written.'
- c. oku-muş ve yazmış-Ø-miş-im.
read-Perf and write-Perf-Cop+Infer+1sg
'I have apparently read and written.'
- d. okumuş ve yazmış-Ø-tı-m.
read-Perf and write-Perf-Cop+ Indic+1sg
'I have apparently read and written.'

The relevant chunks of structure for (63) and (64) are shown in (65). The difference between (62) and (65) lies in the presence/absence of an overt Mood head that supports agreement. It follows that the configurations in (65) result in PF strings which can be parsed into two separate words, since there is enough phonological material to support the copula and agreement.

- (65) a.
-
- b.
-

In all the cases above, morphology receives the following input from syntax: the possibly pronounceable material is clustered in two distinct heads

– $V^0 + \text{Asp}^0$ and $\text{Cop}^0 + \text{Mood}^0$ complexes. When the Mood^0 is null, as in (66a), the string is subject to obligatory reanalysis in PF, since none of the elements in $\text{Cop}^0 + \text{Mood}^0$ complex can bear stress. The situation is distinct from the instances where the Mood suffix is overt, as in (66b): reanalysis into two prosodic words is possible here, since the affixes can be stressed.

- (66) a. \emptyset -Mood
 Syntax: [_{ASP}⁰ V+Asp] [_{MOOD}⁰ Cop+ \emptyset +z-paradigm]
 PF: #V+Asp+**Cop**+ \emptyset +z-**paradigm**# Obligatory reanalysis 1W
 ^none of the elements can be stressed
- b. Overt Mood
 Syntax: [_{ASP}⁰ V+Asp] [_{MOOD}⁰ Cop+Mood affix+Agr]
 PF: #V+Asp# **#Cop+Mood affix+Agr#** Possible reanalysis into 2W
 ^Mood affixes can be stressed

This takes care of the entries (1)–(4) in Table 6. The remaining case is more complicated, since the affixes *can* receive stress, yet they are illicit when supported by a free-standing copula. The partial paradigm from (19–20) is repeated in (67) and (68) with modified glosses. Recall from Section 3.1 that the ungrammaticality of (67a) follows from the combination of obligatory head movement (the lower *DI* must move to the next verbal head – Cop^0) and the CSC, which precludes just such movement from the &P. This combination of independently necessary principles thus necessitates conjunction at the higher level, producing the only acceptable string in (67b).

- (67) a. *[Avşaya git-ti ve denize gir-di]-y-di-k.
 Avsha-Dat go-Past and sea-Dat enter-Past-**Cop**-Past-1pl
- b. [Avşaya git-ti-y-di-k] ve [denize gir-di-y-di-k].
 Avsha-Dat go-Past-**Cop**-Past-1pl and sea-Dat enter-Past-**Cop**-Past-1pl
 ‘That summer we went to Avsha and swam in the sea.’

The outstanding question now is how to rule out (68a) (and its non-SA equivalent in (68b)).

- (68) a. *[Avşa-ya git-ti ve deniz-e gir-di] i-di-k.
 Avsha-Dat go-Past and sea enter-Past **Cop**-Past-1pl
- b. *Avşa-ya git-ti i-di-k.
 Avsha-Dat go-Past **Cop**-Past-1pl
- c. Avşa-ya git-ti-y-di-k.
 Avsha-Dat go-Past-**Cop**-Past-1pl

What distinguishes (68a-b) from (63a-b)/(64a-b) is the element *preceding* the copula. Observe that in (63) and (64) the forms are participial, hence, [–verbal]. As such, they are not subject to V-movement. But in (67) and (68) (of the type $V + sA/DI$) they are [+verbal], and therefore must move to the higher

verbal head. The impossibility of the free-standing copula in (68) follows from this obligatory movement: the entire verbal complex clusters in the highest Mood⁰. Assuming that there is a preference to parse a complex syntactic head as one prosodic word when this is in principle possible, morphology has to interpret the input from syntax as one prosodic word to preserve the morphological integrity of received input, as demonstrated in (69).

- (69) a. Syntax: [_{Mood⁰} V+Mood₁+Cop+Mood₂+k-paradigm]
 b. PF: # V+Mood₁+Cop+Mood₂+k-paradigm # Obligatory reanalysis as 1W

A combination of the results of syntactic processes in conjunction with certain PF restrictions give us a full account of the facts summarized in Table 6.

4. Conclusion

In this paper I have argued against analyzing certain “true” verbal affixes as T⁰. Instead, I proposed an alternative, which separates the verbal affixes in Turkish into two groups: those that are generated under Asp⁰ and those that are the locus of Mood/Modality (summarized in Table 7):

Table 7: Types of affixes

Mood ⁰ [+verbal]		Asp ⁰ [-verbal]	
a. -sA	Conditional	a. -mİş₂	Perfective
b. -DI	Indicative	b. -AcAK	Inceptive
c. -mİş₁	Inferential	c. -İr	Habitual
		d. -Iyor	Progressive

I argued that certain clusters are specified as [+verbal] (i.e., V⁰+Mood⁰). These undergo obligatory head-movement to the higher verbal head. In contrast, complex heads of the type V⁰+Asp⁰ are [-verbal]. They are not subject to head movement, so they stay in-situ.

To explain the SA facts I relied on this mechanism of head movement with the Mood-affixes (and lack thereof with aspectual markers) and the CSC. I showed that all the restrictions on SA follow from this combination of independently necessary principles. In fact, even an ostensibly PF effect was derived in a similar fashion – depending on the output of syntax, PF has various options with respect to whether to spell-out the structures as one word (if it receives only one head cluster) or as two words (if it receives two).

I further demonstrated that the Mood head hosts agreement affixes and, therefore, no independent Agr projection is necessary. These deductions were based on interactions between the sentential negator *değil* and the verbal forms

headed by Mood⁰ and Asp⁰, the behavior of the latter in embedded contexts, their interactions with the Q-particle, and the possibility of optional spell-out of either the lower or higher Mood-heads.

The arguments used to defend the position that what is traditionally analyzed as T⁰ is, in effect, a Mood/Modality marker were founded on the possibility of certain affixal combinations and permutations. Under my account, all the possible variants follow and the impossible combinations are excluded.

The paper also offered some theoretical extensions. First, the empirical arguments for the absence of Agr provide support for Chomsky's claims about the status of Agr in UG. Second, my arguments about the absence of tense in Turkish may be taken to provide independent evidence for the typological link between T- and D-projections congruent with Bošković's conjecture.

References

- BAKER Mark (1985). The Mirror Principle and morphosyntactic explanation. *Linguistic Inquiry* 16(3), 373–415.
- BORSLEY Robert D., KORNfilt Jaklin (2000). Mixed extended projections. In *The Nature and Function of Syntactic categories. Syntax and Semantics* 32, Robert BORSLEY (ed.), 101–132. Orlando: Academic Press.
- BOŠKOVIĆ Željko (2012). On NPs and clauses. In *Discourse and Grammar: From Sentence Types to Lexical Categories*, Günther GREWENDORF, Thomas Ede ZIMMERMANN (eds.), 179–242. Berlin: Mouton de Gruyter.
- BOŠKOVIĆ Željko (2013). Phases beyond clauses. In *The Nominal Structure in Slavic and Beyond*, Lila SCHÜRCKS, Anastasia GIANNAKIDOU, Urtzi ETXEBERRIA, Peter KOSTA (eds.), 75–128. Berlin: Walter de Gruyter.
- BOŠKOVIĆ Željko and Serkan ŞENER (2014). The Turkish NP. In *Crosslinguistic Studies on Noun Phrase Structure and Nominal Reference*, Patricia Cabredo HOFHERR, Anne ZRIBI-HERTZ (eds.), 102–140. Leiden: Brill.
- BENNETT Michael, PARTEE Barbara (1978). Toward the logic of tense and aspect in English. Reproduced by the Indiana University Linguistics Club.
- BROADWELL Geoffrey (2008). Turkish suspended affixation is lexical sharing. In *Proceeding of the Lexical Functional Grammar 08 Conference*, Miriam BUTT and Tract Holloway KING (EDS.). Stanford: CSLI Publications.
- CABLE Seth (2008). Tense, aspect and Aktionsart. Proseminar on semantic theory: Theoretical perspectives on languages of the Pacific Northwest. Handout.[URL: <http://people.umass.edu/scable/PNWSeminar/handouts/Tense/Tense-Background.pdf>; accessed May 10, 2014]
- CHOMSKY Noam (1995). *The Minimalist Program*. Cambridge: MIT Press.
- COMRIE Bernard (1982). Future time reference in the conditional protasis. *Australian Journal of Linguistics* 2(2), 143–152.
- COMRIE Bernard (1985). *Tense*. Cambridge: Cambridge University Press.

- CINQUE Guglielmo (1999). *Adverbs and Functional Heads: A Crosslinguistic Perspective*. NY/Oxford: Oxford University Press.
- CINQUE Guglielmo (2001). A note on mood, modality, tense and aspect affixes in Turkish. In *The Verb in Turkish*, Eser ERGUVALI TAYLAN (ed.), 47–59. Amsterdam: John Benjamins.
- CINQUE Guglielmo, RIZZI Luigi (2008). The cartography of syntactic structures. In *Centro Interdipartimentale di Studi Cognitive sul Linguaggio Working Papers on Language and Cognition Vol. 2*, Vincenzo MOSCATI (ed.), 43–59. Sienna: CISCL Press.
- DESPIC Miloje (2011). Syntax in the absence of determiner phrase. Storrs, CT: University of Connecticut, Ph.D. dissertation.
- DOWTY David (1979). *Word Meaning and Montague Grammar* (Studies in Linguistics and Philosophy 7). Dordrecht: Reidel.
- ERGUVALI TAYLAN Eser (1986). Some aspects of negation in Turkish. In *Proceedings of the Turkish Linguistics Conference*, Ayhan AKSU-KOÇ, Eser ERGUVALI TAYLAN (eds.), 159–177. Istanbul: Boğaziçi University.
- ERGUVALI TAYLAN Eser (1996). The parameter of aspect in Turkish. In *Modern Studies in Turkish Linguistics: Proceedings of the Sixth International Conference on Turkish Linguistics*, Ahmet KONROT (ed.), 153–168. Eskişehir: Anadolu University.
- ERGUVALI TAYLAN Eser (2001). On the relations between temporal/aspectual adverbs and verb form in Turkish. In *The Verb in Turkish*, Eser ERGUVALI TAYLAN (ed.), 97–128. Amsterdam: John Benjamins.
- GEORGE Leland M., KORNFILT Jaklin (1981). Finiteness and boundedness in Turkish. In *Binding and Filtering*, Frank HENY (ed.), 105–127. Cambridge, Massachusetts: MIT Press.
- GIORGI Alessandra, PIANESI Fabio (1997). *Tense and Aspect: From Semantics to Morphosyntax*. Oxford: Oxford University Press.
- GOOD Jeff and Alan YU (2000a). Affix-placement variation in Turkish. In *Proceedings of the 25th Annual Meeting of the Berkeley Linguistics Society*, Jeff GOOD, Alan YU (eds.), 63–74. Berkeley: Berkeley Linguistics Society.
- GOOD Jeff, YU Alan (2000b). Morphosyntax of two Turkish subject pronominal paradigms. Ms. [URL: http://washu.uchicago.edu/pub/Turkish_clitics.pdf, accessed November 10, 2013]
- GRIMSHAW Jane (1986). A morphosyntactic explanation for the Mirror Principle. *Linguistic Inquiry* 17(4), 745–749.
- HANKAMER Jorge (2012). As-phrasal affixes and suspended affixation. Paper presented at *Cornell Workshop on Suspended Affixation*, Ithaca, NY: Cornell University.
- HOFFMAN Beryl (1992). A CCG approach to free word order languages. In *Proceedings of the 30th Annual Meeting on Association for Computational Linguistics*, 300–302. Stroudsburg, PA: Association for Computational Linguistics.
- HORNSTEIN Norbert (1990). *As Time Goes by: Tense and Universal Grammar*. Cambridge: MIT Press.
- KABAK Barış (2007). Turkish suspended affixation. *Linguistics* 45(2), 311–347.
- KAHNEMUYIPOUR Arsalan, KORNFILT Jaklin (2010). The syntax and prosody of Turkish ‘pre-stressing’ affixes. In *Interfaces in Linguistics: New Research Perspectives*, Raffaella FOLLI, Christiane ULBRICH (eds.). Oxford: Oxford University Press.

- KANG Jungmin (2012a). TP-less temporal interpretation. Paper presented at the 14th Seoul International Conference on Generative Grammar (SICOGG14), Seoul: Dongguk University.
- KANG Jungmin (2012b). Why don't you stop by SpecCP? Paper presented at *East Coast Workshop on Syntax (ECO5)*, Amherst, MA: University of Massachusetts.
- KANG Jungmin (2013). Temporal interpretation in the absence of TP. *Language and Information Society* 20, 161–202.
- KAUFMAN Stefan (2005). Conditional truth and future reference. *Journal of Semantics* 22(3), 231–280.
- KAYNE Richard (1994). *The Antisymmetry of Syntax*. Cambridge: MIT Press.
- KELEPIR Meltem (2001). Topics in Turkish syntax: Clausal structure and syntax. Cambridge, MA: Massachusetts Institute of Technology, Ph.D. dissertation.
- KORNFILT Jaklin. (1984). Case marking, agreement, and empty categories in Turkish. Cambridge, MA: Harvard University, Ph.D. dissertation.
- KORNFILT Jaklin (1996). On copular clitics in Turkish. In *ZAS Papers in Linguistics*, Artemis ALEXIADOU, Nanna FUHRHOR, Paul LAW, Sylvia LOEHKEN (eds.), 96–114. Berlin: Zentrum für Allgemeine Sprachwissenschaft 6.
- KORNFILT Jaklin (1997). *Turkish*. London/New York: Routledge.
- KORNFILT Jaklin (1998). On rightward movement in Turkish. In *Proceedings for the Seventh International Conference on Turkish Linguistics*, Lars JOHANSON (ed.), 107–124. Wiesbaden: Harrassowitz.
- KORNFILT Jaklin (2003). Subject case in Turkish nominalized clauses. In *Syntactic Structures and Morphological Information*, Uwe JUNGHANNS, Luka SZUCSICH (eds.), 129–216. Berlin/NY: Mouton de Gruyter.
- KORNFILT Jaklin (2005). Agreement: The (unique and local) syntactic and morphological licenser of subject Case. In *Studies on Agreement*, João COSTA, Maria Cristina Figueiredo SILVA (eds.), 141–172. Amsterdam: John Benjamins.
- KORNFILT Jaklin (2006). Agr in Turkish as an expression of categorial features. In *Proceedings of the Workshop on Altaic Formal Linguistics (WAFL 2)*, Meltem KELEPIR, Belkiz ÖZTÜRK (eds.), 21–46. MIT WPL, MIT, Cambridge.
- KORNFILT Jaklin, WHITMAN John (2011). Genitive subjects in TP Nominalization. Paper presented at *JeNom4: The 4th Workshop on Nominalizations*, Stuttgart: University of Stuttgart.
- KURAL Murat (1993). V-(to I)-to C in Turkish. In *UCLA Occasional Papers in Linguistics*, Filippo BEGHELLI, Mural KURAL (eds.), 17–55. Los Angeles, UCLA.
- KURAL Murat (1997). Postverbal constituents and the linear correspondence axiom. *Linguistic Inquiry* 28(3), 498–519.
- LEWIS Geoffrey (1967). *Turkish Grammar*. Oxford: Oxford University Press.
- MATTHEWSON Lisa (2006). Temporal semantics in a superficially tenseless language. *Linguistics and Philosophy* 29(6), 673–713.
- MIGDALSKI Krzysztof (2010). On the loss of tense and verb-adjacent clitics in Slavic. Paper presented at *Diachronic Generative Syntax 12*, Cambridge: University of Cambridge.
- MIGDALSKI Krzysztof (2013). Diachronic changes in tense marking and cliticization patterns in Slavic. Paper presented at *Formal Approaches to Slavic Linguistics 10*, Leipzig: University of Leipzig.

- MIGDALSKI Krzysztof (to appear). On the decline of tense and the emergence of second position pronominal clitics. In *Proceedings of Formal Approaches to Slavic Linguistics* 20, MIT.
- MONICH Irina (2012). On the (lack of) tense morphology in Latin. Paper presented at *American International Morphology Meeting*, Amherst, MA: University of Massachusetts.
- ORGUN Orhan (1995). Flat versus branching morphological structure: The case of suspended affixation. In *Proceedings of the 21st Annual Meeting of the Berkeley Linguistics Society*, Leela BILMES, Joshua S. GUENTER, Barbara A. KAISER, Ju NAMKUNG (eds.), 252–226. Berkeley: Berkeley Linguistics Society.
- PAUNOVIĆ Željka (2001). Aspectual-temporal relations in Serbo-Croatian verbal morphology. *Essex Graduate Student Papers in Language and Linguistics* 3, 171–196.
- POLLOCK Jean-Yves (1989). Verb movement, Universal Grammar and the structure of IP. *Linguistic Inquiry* 20(3), 365–424.
- ŞENER Serkan (2012). (Non-)peripheral matters in Turkish Syntax. Storrs, CT: University of Connecticut, Ph.D. dissertation.
- SEZER Engin (2001). Finite inflection in Turkish. In *The Verb in Turkish*, Eser ERGUVANLI TAYLAN (ed.), 1–47. Amsterdam: John Benjamins.
- SLOBIN Dan I., AKSU KOÇ Ayhan (1982). Tense, aspect and modality in the use of the Turkish evidential. In *Tense and Aspect: Between Semantics and Pragmatics*, Paul J. HOPPER (ed.), 185–200. Amsterdam/Philadelphia: John Benjamins.
- TODOROVIĆ Neda (to appear a). Aspectual asymmetries and the lack of TP in Serbian. In *Proceedings of Syntax, Phonology and Language Analysis (SinFonIJA 6)*.
- TODOROVIĆ Neda (to appear b). Finiteness mismatches in VP-ellipsis and distribution of aspect in Serbian. In *Logic, Language and Computation: Proceedings of TbiLLC 2013*, Martin AHER, Daniel HOLE, Emil JERABEK, Clemens KUPKE (eds.). Dordrecht: FoLLI subline of Lectures Notes in Computer Science, Springer.
- TODOROVIĆ Neda (to appear c). (Im)perfect(ive) VP: Aspect-sensitive VP-ellipsis in Serbian. In *Proceedings of Chicago Linguistics Society* 49.
- TOSUN Gülşat (1998). Split INFL hypothesis in Turkish. Istanbul: Boğaziçi University, M.A. dissertation.
- WILLIAMS Edwin (1981). On the notions ‘Lexically Related’ and ‘Head of the Word’. *Linguistic Inquiry* 12(2), 245–274.
- YAVAŞ Feryal (1980). On the meaning of tense and aspect markers in Turkish. Lawrence, KS: University of Kansas, Ph.D. dissertation.
- YAVAŞ Feryal (1982a). Future reference in Turkish. *Linguistics* 20(5/6), 411–429.
- YAVAŞ Feryal (1982b). The Turkish aorist. *Glossa* 16(1), 40–53.

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